

Amendments to the Specification

The specification is being amended to correct typographical and clerical errors.

No new subject matter is being added.

Please replace the paragraph beginning on page 4, at line 27, and ending on page 4, line 28, with the following rewritten paragraph:

FIG. 6 illustrates an exemplary display ~~that is useful when for use in~~ determining the strain rate of the septal wall ~~and in particular for performing measurement of strain rate by using multi-direction PW spectral Doppler lines;~~

Please replace the paragraph beginning on page 5, at line 3, and ending on page 5, line 4, with the following rewritten paragraph:

FIG. 8 illustrates an exemplary display containing an imaging plane capable of showing the four chambers of a heart;

Please replace the paragraph beginning on page 5, at line 5, and ending on page 5, line 6, with the following rewritten paragraph:

FIG. 9 illustrates an exemplary display employing duplex pulsed wave Tissue Doppler image for facilitating the guiding of range gates ~~and in particular showing a pulsed wave tissue Doppler image;~~

Please replace the paragraph beginning on page 5, at line 9, and ending on page 5, line 10, with the following rewritten paragraphs:

~~FIGS. 11A and B illustrate exemplary displays containing standard duplex and triplex images, respectively; FIG. 11A illustrates an exemplary display containing a duplex image with two spectral lines one each on septal and lateral free walls, respectively, along with a graph illustrating mean velocity;~~

~~FIG. 11B illustrates an exemplary display containing a triplex image with two spectral lines one each on septal and lateral free walls, respectively, along with a graph illustrating mean velocity;~~

Please replace the paragraph beginning on page 5, at line 11, and ending on page 5, line 11, with the following rewritten paragraph:

FIG. 12 illustrates an exemplary display showing multi-gate averaging for use with apical four-chamber duplex or triplex tissue Doppler imaging and further useful for achieving at least two PW spectral Doppler views in conjunction with a multi-gate structure along each PW spectral view;

Please replace the paragraph beginning on page 5, at line 12, and ending on page 5, line 14, with the following rewritten paragraphs:

FIGS. 13A and B illustrate an exemplary display having template images depicting normal displacement and dysynchronous left ventricular contraction, respectively; FIG. 13A illustrates an exemplary display having template images depicting normal displacement of left ventricular contractions using triplex with two spectral lines one each on septal and lateral free walls displayed in conjunction with graphs showing displacement;

FIG. 13B illustrates an exemplary display having template images depicting dysynchronous left ventricular contraction using triplex with two spectral lines displayed in conjunction with graphs showing displacement;

Please replace the paragraph beginning on page 5, at line 22, and ending on page 5, line 22, with the following rewritten paragraph:

FIG. 17 illustrates an exemplary display containing user defined anchor points consisting of 5 manually placed anchor points on a 4-chamber apical view B-mode image;

Please replace the paragraph beginning on page 5, at line 23, and ending on page 5, line 24, with the following rewritten paragraph:

FIG. 18 illustrates a method for using motion compensated block matching to track the movement of a block containing image data; compensated block matching to track movement of a block containing image data using a search region defined as

$$-dx/2 \leq x \leq dx/2 \quad -dy/2 \leq y \leq dy/2 \quad \text{and}$$

a motion estimated displacement vector of (dx, dy);

Please replace the paragraph beginning on page 8, at line 13, and ending on page 8, line 29, with the following rewritten paragraph:

Processing unit 35 comprises ultrasound beamformer electronics 33, ~~firewire~~ FireWire interfaces 23, 25, single board computer 21, hard disk/flash memory storage 31, a display 19 and optional peripherals 37. The output of transducer assembly 11 is received by beamformer electronics 33. Beamformer electronics 33 receives the conditioned signals and introduces appropriate differential delays into each of the received signals to dynamically focus the signals such that an accurate image can be created. These dynamically focused signals are referred to as beamformed signals. Further details of exemplary beamforming electronics 33 and delay circuits used to introduce differential delay into received signals and the pulses generated by a pulse synchronizer are described in U.S. Patent No. 6,111,816 to Alice M. Chiang et al., issued August 29, 2000 entitled "Multi-Dimensional Beamforming Device," the entire content of which is incorporated herein by reference. Beamformed signals are then conveyed from ~~Firewire~~ FireWire interface 25 to ~~Firewire~~ FireWire interface 23. "FireWire" refers to IEEE standard 1394, which provides high-speed data transmission over a serial link. There also exists a wireless version of the FireWire standard allowing communication via an optical link for untethered operation.

Please replace the paragraph beginning on page 9, at line 18, and ending on page 9, line 22, with the following rewritten paragraph:

~~Firewire~~ FireWire interface 23 provides the beamformed signals to single board computer 21. Single board computer 21 may comprise, among other things, a processor, main memory, read only memory (ROM), storage device (collectively hard disk and/or flash storage 31), bus, display 19, keyboard, cursor control, and communication interface (collectively optional peripherals 37).

Please replace the paragraph beginning on page 10, at line 19, and ending on page 10, line 25, with the following rewritten paragraph:

FIG. 1B illustrates a second exemplary embodiment of an ultrasound imaging system 8. System 8 comprises a transducer array 14 operating in essentially a similar manner as ultrasound transducer assembly 11. In addition, system 8 comprises a transmit/receive chip 22, Custom or Firewire FireWire Chipset 24, a memory 26, a system first-in-first-out (FIFO) register 27, a system controller 28, an analog-to-digital converter (A/D) 29, a preamp/TGC chip 30 and, a beamformer 32.

Please replace the paragraph beginning on page 10, at line 26, and ending on page 11, line 3, with the following rewritten paragraph:

System 8 may further comprise a second custom or Firewire FireWire Chipset 34, a microprocessor 36, a keyboard/mouse controller 38, a core or main memory 40 and a display controller 42, a front-end interface or processing unit 18 which is connected by cables 16, for example, coaxial cables to the transducer array 14 and includes a transducer transmit/receive control chip 22. Alternatively, front-end interface unit 18 may be communicatively coupled to transducer array 14 via free space radio frequency (RF) or optical means.

Please replace the paragraph beginning on page 11, at line 20, and ending on page 12, line 5, with the following rewritten paragraph:

FIG. 1C is a schematic functional block diagram of an exemplary embodiment of an ultrasound imaging system 10 that can be used for practicing aspects of the invention. Similar imaging systems are described in U.S. Patent No. 5,957,846 to Alice M. Chiang et al., issued September 28, 1999, entitled "Portable Ultrasound Imaging System," the entire contents of which are being incorporated herein by reference. Ultrasonic imaging system 10 may comprise a transducer array 14, cables 16, a transducer transmit/receive control module 18 compressing a transmit/receive chip 22, a customer Firewire FireWire chip-set chipset 24, 34, a memory 26, a system controller 28, a preamp/TGC Chip 30, and a beamforming module 32. System 10 also comprises a host computer further compressing a microprocessor 36, a keyboard/mouse controller 38, a core memory 40 and a display controller 42. An interface array may be employed for communicatively coupling transducer transmit/receive control module 18 to host computer 20. Host computer 20

may take the form of a laptop computer, a desk top computer, a workstation, a personal digital assistant or any other form factor comprising the functionality of components of host computer 20 shown in FIG. 1C.